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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WELLS ST. JOHN P.S.
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SPOKANE, WA 99201

EXAMINER

HUYNH, YENNHU B

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,003

Applicant(s)

BASCERI, CEM

Examiner

Yennhu B. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-16 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 & 7-15 is/are rejected.
- 7) ☒ Claim(s) 2-4, 16 and 19-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/15/03 7/30/03 09/02/03 1/14/04 9/17/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Amendment filed on 01/04/04.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/14/04 has been entered.

Claims Applicant's election without traverse of claims 1-23 in Paper No. 10 is acknowledged.

Claims 24-42 and 43-60 have been canceled by Amendment filed on 10/22/02 and 2/12/02.

Claims 5, 6, 17 & 18 are cancelled by Amendment filed on 07/29/03.

Currently, claims 1-4, 7-16 & 19-23 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7-11 & 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsuda et al. (U.S. 6143597).

Matsuda et al. disclose a method of manufacturing capacitor, which include:

-Re. claim 1: a first capacitor electrode 2; a perovskite type dielectric material 6 (contains dielectric layer material 7) (fig.1 c), over the first capacitor electrode 2, the perovskite type dielectric material having a first edge region 5 proximate the first electrode and a portion further 6 /7 from the first electrode than the first edge region 5, wherein the first perovskite type dielectric material having a common chemical composition of SrBiTaO (col.3 lines 40-46 and col. 4 line 1) within the first edge region 5 and the portion 8 of the dielectric layer 7 (of the dielectric layer 6), wherein the first edge region 5 and the portion 8 of the dielectric layer 7 (of the dielectric layer 6) differ in crystallinity relative to one another by forming in different crystal grain size (col. 3 lines 55-62), forming a second capacitor electrode 4 over the perovskite type dielectric material (fig. 1 d).

-Re. claims 7-11: wherein the common chemical composition comprises and consists essentially of barium, strontium, titanium and oxygen (col.3 lines 4-25).

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-Re. claim 13: wherein the edge region 5 and the portion 6 (7&8) are together formed by an uninterrupted chemical vapor deposition (cl. 2 lines 58- 64 and col. 3 lines 49-51).

-Re. claims 14 & 15: wherein the first capacitor electrode 2 and second capacitor electrode 4 comprises platinum (col. 1 lines 32-43).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (U.S. 6143597) in view of Eastep et al. (EP 0892426A2).

Matsuda et al. disclose substantially all of claimed features, but do not disclose wherein the common chemical composition comprises one or more of barium strontium titanate, barium titanate, lead zirconium titanate, and lanthanum doped lead zirconium titanate.

-Re. claim 12: Eastep disclose a PZT common chemical composition ferroelectric thin film 14,16,18, which comprises of zirconium, lanthanum, and strontium. (Col. 1, lines 38-41 and col. 3 lines 32-35).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Eastep et al.'s common chemical composition multi-layer ferroelectric layer comprises one or more of barium strontium, titanate, barium titanate, lead zirconium titanate, into the method of Matsuda et al., to obtain different thickness or concentration of such region material, which effect to crystallize the layers of the structure.

Allowable Subject Matter

Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: Prior art do not disclose where in the first edge region has less crystallinity than the portion (cl.2); wherein the first edge region is substantially amorphous and wherein the portion is substantially crystalline (cl.3); and wherein the second edge proximate the second capacitor electrode has an amount of crystallinity that is about the same as the first edge region (cl.4).

Claims 16 & 19-23 are allowable over prior art of record.

The following is an examiner's statement of reasons for allowance: Prior art do not disclose a common chemical composition perovskite type dielectric throughout the

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substantially crystalline region and throughout the first and second substantially amorphous regions, in combination with other limitations (cl. 16).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yennhu B. Huynh whose telephone number is 571-272-1692. The examiner can normally be reached on M-F 8.30AM-7.00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached 571-272-1702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

YNBH,

011405


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800